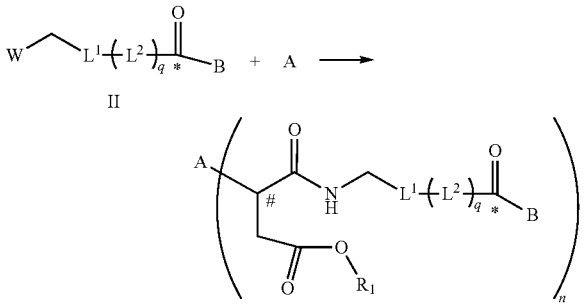
wherein R_3 is selected from the group consisting of: hydrogen, halogen, methyl, ethyl, nitro, methoxy and ethoxy, each p is independently 0, 1, 2, 3 or 4;

R'_2 is halogen;

the other substituents are each defined as described in claim **3**.

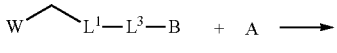
25. A method for preparing the compound represented by Formula III or Formula III' according to claim **5**, a salt or a solvate thereof, comprising the following steps:

reacting the compound represented by Formula II or Formula II' or a salt or a solvate thereof with A, wherein A is coupled to the site # through a S atom in the targeting compound molecule to obtain the compound represented by Formula III or Formula III'.

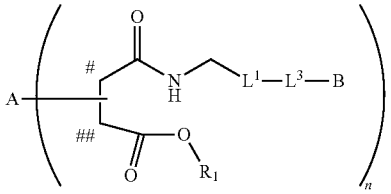


II

III



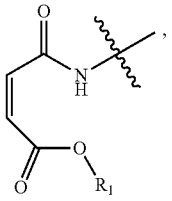
II'



III'

wherein:

W is



wherein the two carbonyl groups are located on the same side of the C═C double bond, which is a cis structure, R_1 is a C_{1-6} linear or branched alkyl, and R_1 is optionally mono- or multi-substituted by one or more substituents selected from the group consisting of: halogen and C_{1-4} alkoxy;

the other substituents are each defined as described in claim **5**.

26. A pharmaceutical composition, which comprises at least one compound according to claim **5**, a salt or a solvate thereof, and one or more pharmaceutically acceptable carriers or excipients.

27. (canceled)

28. A method for diagnosis, prevention or treatment of a disease or condition or reducing a severity of the disease or condition, the method comprising administering to a patient in need of such treatment an effective amount of the compound according to claim **5**, a salt or a solvate thereof, wherein the disease or condition is selected from the group consisting of tumor, infectious disease, hematological disease, metabolic disease and inflammation.

29. (canceled)

30. The compound according to claim **21**, a salt or a solvate thereof, wherein MAB is selected from the group consisting of: anti-HER2 humanized monoclonal antibody mil40, trastuzumab (HERCEPTIN), pertuzumab (PERJETA), cetuximab (ERBITUX), panitumumab (VECTIBIX), rituximab (RITUXAN), alemtuzumab (CAMPATH), ibritumomab (ZEVALIN), tositumomab (BEXXAR), ofatumumab (ARZERRA), bevacizumab (AVASTIN), ipilimumab (YERVOY), denosumab (XGEVA), pembrolizumab (KEYTRUDA), nivolumab (Opdivo), Avelumab (Bavencio), Atezolizumab (Tecentriq), durvalumab (Imfinzi), sacituzumab, rovalpituzumab, and biological analogues thereof.

31. The compound according to claim **5**, a salt or a solvate thereof, wherein B is selected from the group consisting of: auristatin, methyl-auristatin E (MMAE), maytansine, maytansinoids, DM1, DM3, DM4, paclitaxel, calicheamicin, duocarmycin, doxorubicin, camptothecin, PBD (pyrrolobenzodiazepines) cytotoxin and derivative thereof

32. The method according to claim **28**, wherein the tumor is selected from the group consisting of cancer, lymphoma, lymphoid tumor, blastoma, sarcoma and leukemia.

33. The method according to claim **32**, wherein the cancer is selected from the group consisting of: breast cancer (for example, HER2-positive breast cancer); squamous cell carcinoma (for example, epithelial squamous cell carcinoma); lung cancer, including small cell lung cancer, non-small cell lung cancer, adenocarcinoma of lung and squamous cell carcinoma of lung; peritoneal cancer; liver cancer; gastric cancer; gastrointestinal cancer; pancreatic cancer; glioblastoma; cervical cancer; ovarian cancer; liver cancer; bladder cancer; urethral cancer; hepatocellular tumor; breast cancer; intestinal cancer; colon cancer; rectal cancer; colorectal cancer; endometrial cancer; uterine cancer; salivary gland cancer; renal or kidney cancer; prostate cancer; vulvar cancer; thyroid cancer; liver cancer; anal cancer; penile cancer; melanoma; multiple myeloma and B-cell lymphoma; brain cancer; gallbladder cancer; esophageal cancer; cholangiocarcinoma; head and neck cancer and related metastatic tumor.

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